

#1938669

ID: 8800840

Balderson

GB

615

.C2

C527

I LIKE DIRT : desert strategies for the Bureau of Land Management



Phil Cohen
John Huffman
Lisa Kritzer
Diane Steinmetz

December 1976

BUREAU OF LAND MANAGEMENT LIBRARY

Denver, Colorado



8800840

PROGRAM IN PUBLIC POLICY STUDIES
OF THE CLAREMONT COLLEGES

Bureau of Land Management
Library
Bldg. 50, Denver Federal Center
Denver, CO 80225



United States Department of the Interior

IN REPLY REFER TO

6290
C-931.3

BUREAU OF LAND MANAGEMENT

STATE OFFICE

Federal Office Bldg., Room E-2841
2800 Cottage Way

Sacramento, California 95825

Memorandum

July 16, 1976

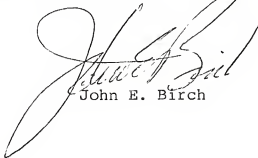
To: DMs, Riverside and Bakersfield

From: Chief, Division of Resources

Subject: I Like Dirt

Please give us your analysis of the enclosed report,
I Like Dirt: Desert Strategies for the BLM.

We would like to know if you feel any of the recommendations are viable and those you feel we should consider implementing. Also, we would like any comments that would help us in a review and analysis of the report.



John E. Birch

Enclosure

cc: DPS - Director



The Program in Public Policy Studies of The Claremont Colleges is a joint endeavor of Claremont Graduate School, Claremont Men's College, Harvey Mudd College, Pitzer College, Pomona College, and Scripps College. The views expressed herein in no way represent an official opinion of The Claremont Colleges.

John D. Sullivan, Director
Kit Wolf, Executive Secretary

135 East 8th Street
Claremont, California 91711
(714) 626-8511 Ext. 3788

Copies of this report are available from the Program in Public Policy Studies at a cost of \$1.00 per copy.

TABLE OF CONTENTS

	<u>page</u>
Acknowledgements	i
Distribution List	ii
INTRODUCTION	1
ORV USE AND ENVIRONMENTAL IMPACT IN THE CALIFORNIA DESERT	3
1. ORVs and the Soil	3
2. ORVs and Vegetation	5
3. ORVs and Wildlife	7
INFORMING THE PUBLIC	10
THE ENCOURAGEMENT OF PUBLIC PARTICIPATION	11
ENFORCEMENT POWERS	11
INVENTORY OF LANDS	12
LAND TRANSFERENCE	13
CONCLUSION	14
BIBLIOGRAPHY	16

ACKNOWLEDGEMENTS

As in any research report, many persons and resources were invaluable in the realization of its goals. In this one, a very special thanks must be given to John Rodman. Not only are the uncountable hours of editing assistance an important contribution, but the willingness to devote freely any time, energy and advice to the various problems as they arose. None of those taking part in this study had any real previous experience in the writing of a policy report, but John's guidance helped to give it the necessary internal cohesiveness that is all-important in such a report.

Special thanks go to the PPS staff. Not only was their constant nagging to meet deadlines invaluable, but their warm personalities always contributed a sense of friendly involvement. Thanks to Larry Luton for title and humor (along with the kind of advice no one else would have dared give); to Karen Kahn for keeping after us; to Kit Wolf for her unerring ability to type error free (and always answering the questions everyone else was too confused to answer); and to Mack Gilkeson, Director of the Program. And finally the people at the BLM office (Riverside) for contributing interview time and information without which this acknowledgement would be totally unnecessary.

Phil Cohen, Pitzer College
John Huffman, Claremont High School
Lisa Kritzer, Pitzer College
Diane Steinmetz, Scripps College

DISTRIBUTION LIST

Charles H. Bell, High Desert Environmental Defense Fund
 Curt Berklund, Director of the Bureau of Land Management
 Sid Bernstein, Editorial Writer for the Los Angeles Times
 Desert Protective Council
 James L. Dodson, Sierra Club
 Mary Ann Eriksen, Sierra Club
 Bill Flint, Bureau of Land Management, Riverside
 Merrill Goodall, Claremont Graduate School
 Lou Haas, Office of Senator Alan Cranston
 Tim Hanify, Ecology Center of Southern California
 Thomas Kleppe, Secretary, U.S. Dept. of the Interior, Washington, D.C.
 Dick Kuehner, Bureau of Land Management, Riverside
 Bill Mortimer, Bureau of Land Management, Barstow
 Nancy Pearlman, Ecology Center of Southern California
 John Paeschke, Office of Senator John Tunney
 J. Russell Penny, State Director of the Bureau of Land Management,
 Sacramento
 Dave Petersen, Sierra Club
 Congresswoman Shirley Pettis
 Neil Pfulb, Planning Director, Bureau of Land Management, Riverside
 Martin Prisco, Bureau of Land Management, Riverside
 John Rodman, Pitzer College
 Robert C. Stebbins, Zoology Dept., University of California, Berkeley
 John C. Whitaker, Under Secretary, U.S. Dept. of the Interior,
 Washington, D.C.
 Cliff Yardley, Bureau of Land Management, El Centro

INTRODUCTION

During recent years the massive increase in the numbers of people traveling to the California Desert for recreational purposes has made it abundantly clear that a sound management program is necessary. As a result, there is presently legislation in Congress which would provide the Bureau of Land Management (BLM) with added powers to implement an adequate program. Among the changes that would occur with the passing of such a bill would be the acquisition of police powers by BLM rangers.¹

Presently, the BLM is operating under a management program entitled "Interim Critical Management Program (ICMP)", which is fundamentally a program that attempts to classify lands into four categories of Off-Road Vehicle (ORV) use. These classifications range from "open" to "closed", with the intermediate categories of "restricted" and "special design". However, it is the recruiting of public cooperation that is the primary focus of this program for achieving the management of desert lands with respect to ORV use.

The BLM's desert management problems come into sharper focus when it is noted that it is responsible for some 12 million acres of California Desert lands. This is compounded by recent statistics which reveal a sharp increase in visitor-day² use in the California Desert. In 1968 there were 4.9 million visitor-days recorded in the desert. By 1970 this figure had exploded to 7 million, and present trends indicate that by the year 2000, this figure could reach the 50 million mark. About half of these visitor-days (as is presently the case) will have been recorded by Off-Road Vehicle users.³ The possible results of such heavy use suggest imminent destruction for desert biomass in California.

¹ The bills introduced are: in the Senate, S.71 by California Senators Alan Cranston and John Tunney; in the house, H.R. 820 by the late California Congressman Jerry Pettis. These two bills have presently been incorporated into a larger bill that would re-organize the BLM--referred to as the "Organic Act".

² One visitor-day equals one person in the desert for one day. If 20 people visit the desert in one day that equals 20 visitor days.

³ Richard A. Grant, Jr., "The Fight for the California Desert: Conserve or Destroy?" Cry California, Winter, 1972-1973; Alan Cranston in Congressional Record--Senate, January 15, 1975, S142.

To see the California Desert as an empty wasteland would be to neglect many important resources unique to California. This desert is a rich natural landscape, as Senator Cranston points out:

This vast desert is an area of tremendous ecological diversity and rich in historical, scenic, archeological, environmental, biological, cultural, scientific, and educational resources. Physically, the California Desert ranges from snow-capped mountains to plateaus, basins, dry lake beds, rivers and washes. The desert has more than 700 species of flowering plants, of which 217 are found nowhere else in the world.⁴

There can also be found abundant wildlife, with over 200 species of birds, over 40 of which are resident. There are 80 different mammals, 12 amphibians and 10 native fishes. This inventory does not include the innumerable insects and invertebrates, some of which are still undiscovered.⁵ This brief inventory does not even mention the archeological sites which comprise the richest concentration of prehistoric art in the world.⁶

With these resources in mind, the remainder of this report will attempt to outline management proposals which our research indicates should be adopted by the BLM in any "final" management program. These proposals are presented with the underlying assumption that the proposed Organic Act will pass, giving the California BLM increased money and power for implementation.⁷

⁴ Alan Cranston, Ibid., S142.

⁵ Robert C. Stebbins, "Off-Road Vehicles and the Fragile Desert, Part II," The American Biology Teacher, May 1974 (p. 297).

⁶ Personal interview, Fall 1974, Bill Flint and Bill Mortimer, of the BLM.

⁷ This assumption is made as a result of interviews with staff in the offices of Alan Cranston and John Tunney. We talked to John Paeschke in Sen. Tunney's office and Lou Haas in Sen Cranston's office. Lou Haas put us in telephone contact with staff in Washington, D.C. (Ann Ray) and gave us affirmative information regarding the bills in the House and Senate.

ORV USE AND ENVIRONMENTAL IMPACT IN THE CALIFORNIA DESERT

1. ORVs and the Soil

Although there are a large variety of soils in the desert, they are all usually labeled together under the description of "desert pavement". The "desert pavement" is composed mostly of rocks less than six inches wide, beneath which is a layer of fine particles that become airborne once the pavement is broken. This pavement plays a crucial role in maintaining the stability of the desert ecology. Any damage to the desert soil will result in repercussions to all life forms directly or indirectly dependent on that soil for survival.

ORVs cause soil damage in a variety of ways. They help to accelerate erosion; cause compaction; and degrade the soil biota. The most obvious damage by ORVs is rapid, unnatural erosion, destroying the potential productivity of the desert floor.⁸ This soil run-off is not the only destruction that may result from ORV use. Occurrence of dust in the air has also become a major concern. A. Pearce has shown that dune buggies and motorcycles operating on sand dunes, churn the sand and cause more continuous production of dust than would otherwise occur.⁹ The effects of such dust can be far-reaching. For instance, a satellite photograph of January 1, 1973, taken during a Santa Ana condition,¹⁰ revealed some striking local atmospheric conditions. Dust plumes were discovered and their source sites were found to be areas of intensive recreational vehicle use.¹¹ The ORVs had loosened the surface material and made the soil more susceptible to wind dispersal. This is even more significant when one considers the millions of dollars of damage that occur each year as a result of wind-blown dust in the desert. This includes damage to crops, campers, dwellings and recreational and transportation facilities and vehicles.¹²

⁸ U.S. Bureau of Land Management, The California Desert, January 1970.

⁹ A. Pearce, "Vehicle Use Blamed for Blowing Sand," Desert Sun, June 28, 1972.

¹⁰ A Santa Ana condition is a weather front that produces winds that originate in the desert and move in a west to southwest direction.

¹¹ L.W. Bowden, J.R. Huning, C.F. Hutchinson, C.W. Johnson (Department of Earth Sciences, U.C. Riverside), "Satellite Photograph Presents First Comprehensive View of Local Wind: the Santa Ana," Science, June 7, 1974, vol. 184, no. 4141.

¹² Ibid.

Another aspect of soil damage is compaction. Compaction plays a crucial role in determining the long and short term effects on vegetation.

Compaction of the soil reduces the pore spaces between soil particles and can occur to depths of several inches. When soils are compacted, there is decreased moisture available for plant growth, increased surface runoff, and decreased germination.¹³

The greater the degree of compaction, the longer will be the period for habitat recovery. The potential for recovery of vegetation and wildlife also decreases as compaction increases. The moisture content of the soil also critically influences compaction. The wetter the soil, the greater susceptibility to compaction.¹⁴ Therefore, the desert is particularly vulnerable to damage through compaction after rains. If compaction continues, the BLM estimates that recovery may take from "one year to decades, to centuries, if ever."¹⁵

Another type of damage resulting from soil compaction is the extensive loss of soil biota. As the soil loses much of its air content through compaction, the nitrogen-fixing algae are killed. Accompanying this is the killing of hydroscopic-algal-lichen crust, organisms critical to the survival of vegetation because they help to slow the drying of the soil.¹⁶

This impact information is suggestive of one major change that the BLM might incorporate into its management programs. It could give special consideration to the amount of ORV use that would be permitted in the desert after rains. Although soil damage is inevitable with respect to ORV use, it would seem that lands designated as "restricted" and "special design", should be managed differently as a result of the increased vulnerability of the soil to compaction when wet. In this way, the land would retain an increased capacity for recovery. "Restricted" lands are those in which ORVs are limited to "designated" roads and trails, while "special design" are lands for

¹³ Bureau of Land Management, Final Environmental Impact Statement: Proposed Barstow-Las Vegas Motorcycle Race, October 1974, p. III-17.

¹⁴ Ibid., III-2.

¹⁵ Ibid., III-18, III-22, III-28.

¹⁶ R.E. Cameron and G.B. Blank, Desert Algae: soil crusts and diaphanous substrata as algal habitats, Technical Report 32-971, Jet Propulsion Laboratory, California Institute of Technology, Pasadena, 1966.

unusual recreational events, such as motorcycle racing. In both designations, concern is with allowing recreational vehicle use while also restricting damage to manageable limits.

Special management could be done in a number of ways. Certain "rain" months might be designated as periods during the year in which "restricted" and "special design" lands were closed to ORVs. The BLM could also look into the feasibility of supplying a toll-free telephone number giving information to an ORV user as to what areas may have been closed because of recent rains. Admittedly, such a program's success would be contingent upon the ability of the BLM to circulate information to the public as to their responsibilities regarding the use of ORVs. This general problem of citizen responsibility will be dealt with later in this report (Informing the Public).

2. ORVs and Vegetation

Soil is crucial to the desert ecology and any damage to the soil will have repercussions upon the vegetation. Compaction is one of the major sources of damage to vegetation, along with being an important factor working against the re-establishment of damaged vegetation. Along with a decrease in the germination of seeds, the BLM also points out that:

There is much less chance of vegetation becoming re-established. The greater the degree of compaction, the longer the period required for habitat recovery.¹⁷

This information lends added support to the contention that "restricted" and "special design" areas should be closed following rains.

ORV damage to vegetation is not restricted to compaction. Often there is direct damage to annuals.¹⁸ This damage has severe consequences for the desert community. The tons of seeds which these annuals release each year are a major food source for desert creatures, from the ant to the bighorn sheep to the eagle. These same annuals are the source of flowers that people from urban areas travel to see during a good spring bloom.¹⁹

¹⁷ BLM, Final EIS: Barstow-Las Vegas, op. cit., p. 111-17.

¹⁸ Ibid., p. III-17-18. Annuals are plants that flower and bear fruit in their first season and then die, as opposed to perennials which flower and bear fruit for more than one season.

¹⁹ Ibid., p. III-17-18.

Paralleling the damage to annuals, particularly during the seeding season, is damage to perennials such as the creosote bush. Creosote bush, which is one of the dominant plants of the California Desert, can be found on some 78% of the lands. When this perennial is killed, it takes at least ten years before it can once again become an important wind and water control device.²⁰ One of the conclusions drawn by the BLM regarding ORV damage to creosote bush is stated as follows:

A projection of future trends on increased use suggests that even the minimum amount of existing damage to the soil and vegetation on a single cross country trail in the creosote vegetation type could become very serious.²¹

From this information we feel that greater importance should be placed on the restriction of ORVs during the flowering and seeding season. It might be advisable that lands normally designated as "restricted" and "special design" be more closely supervised, if not altogether closed to ORVs, to allow flowering and seeding patterns to heal, thereby giving the desert a greater opportunity to "mend its wounds".

Damage to vegetation by ORV use is a complex phenomena. The eventual effects are, however, discernible and can be outlined as follows: ORV use

- a. reduces the number of shrubs
- b. reduces the diversity of shrub species by selectively impacting the smaller, more fragile species
- c. reduces the number of annual wildflowers that will germinate and flower the following years
- d. reduces the diversity of annual wildflowers
- e. favors the growth of some exotic weeds.²²

There is also considerable threat of smog damage to plants in areas of concentrated ORV use. If ORVs are used in an area where an inversion layer may form, or where some topographic features might restrict dispersion of pollutants, smog may become trapped in localized areas with possibly serious effects. The range of effects of pollutants may differ, but in general they include defoliation, flower injury, yellowing of leaves, and abnormal growth. Smog can retard growth and increase the

²⁰ U.S. Bureau of Land Management, The California Desert: A Recreation Study of the Desert Public Domain Lands under the Jurisdiction of the BLM. Sacramento, 1968 (prepared by the California State Office of the BLM and the Western Regional Office of the National Park Service), p. 69.

²¹ Ibid., p. 69.

²² Ibid., p. III-18.

incidence of disease.²³ Almost any kind of damage to plants in the desert may result in the increased occurrence of parasites that will complete the destruction.²⁴

We understand that the closing of large sections of the desert to ORV users for a lengthy period of time is impractical. Nevertheless, the BLM should take steps to assure that some kind of increased patrolling, with the establishment of more stringent regulations, be implemented to avoid undue increases of damage resulting in the desert due to its greater vulnerability. Rains, seasonal conditions, and topography should be carefully considered in the implementation of a time-variable scheme for desert use. This, of course, would have to be closely aligned with plans to inform and educate the public at large.

3. ORVs and Wildlife

Damage to and loss of vegetation has particularly important effects on animal-plant food chains and webs and the transfer and flow of energy in a community. Reduction of vegetation sets off a series of related events which are complex but predictable, because plants form the basis of all food chains and webs.²⁵

As this statement by the BLM indicates, any vegetation damage will also have effects upon wildlife. The protection of wildlife presents unique problems with regard to ORV use. At present there is an abundance of information that helps to give a reasonable idea of what happens to wildlife with the presence of ORVs.

As noted earlier, as soil and plant life deteriorate, so must all forms of animal life. As such, any management program in the desert must be closely integrated with soil and vegetative damage while still accounting for the unique circumstance surrounding wildlife.

Present information suggests that certain modifications and additions are needed in the present BLM policy. It is apparent that heaviest ORV use occurs during nesting and mating seasons of various lizards and birds. This overlap is due to the fact that rains and mating occur during the height of the holiday season and when weather conditions are most tolerable in the desert. The BLM, noting this crucial simultaneity, supposes that:

²³ M.F. Baldwin and D.H. Stoddard, Jr., The Off-Road Vehicle and Environmental Quality, 2nd ed., The Conservation Foundation, Washington, D.C., 1973

²⁴ Ibid.

human harrassment will undoubtedly cause nest desertion. Increased use of remote areas inhabited by bighorn sheep may cause these shy animals to decline in numbers as they are forced into unsuitable environments.²⁶

More recent information released by the BLM points out that nests are often placed on the ground along the edges of bushes by such birds as the poorwill, lesser nighthawk, horned lark, and mourning dove.²⁷ This and other information,²⁸ suggests that the designations of BLM lands as "open", "closed", "restricted", and "special design" are not sufficient. It might be advisable that land normally designated as "restricted" and "special design" be designated as "closed" during that time of the year when nesting and mating behaviors are at their peak. This fits in well with previous proposals regarding vegetation and soil compaction, since, in each case, approximately the same months of the year are being discussed. This added "temporal" dimension to management would help the land sustain its ability to support wildlife. The diminished noise resulting from such a policy change would have beneficial effects upon wildlife. The BLM has already noted that during the winter season, when big game animals exist under the greatest stress due to weather conditions, excessive disturbance may result in abortion of embryos, absorption of the fetus, and even death to the animal. This occurs indirectly by increasing stress to the point of making the animal more susceptible to disease and parasites.²⁹

"Open" areas need not be closed since the consistent presence of ORVs will probably have already resulted in widespread habitat destruction, therefore preventing the presence of any substantial numbers of animals during the mating season.

With regard to endemic and endangered species, it would appear that added consideration should be given. There is sufficient data pinpointing the detrimental effects of ORVs upon wildlife to indicate the appropriate steps that are needed. Since endemic (species that can be found nowhere else) and endangered species, once gone, are irreplaceable resources, lands should be designated as "closed" so that their continued existence could be guaranteed. The size of such closures should be sufficient to account for the varied ways in which

²⁶ BLM, The California Desert, 1968, op. cit., p. 81.

²⁷ BLM, Final EIS: Barstow-Las Vegas, op. cit., p. III-19.

²⁸ BLM, Ibid., pp. III-19-22; T.H. Watkins, "Infernal Machines on the Public Lands," Cry California, vol. 4, Spring 1969; Baldwin and Stoddard, op cit.

²⁹ Ibid.

ORVs endanger wildlife. For instance, the compaction of soil, besides decreasing vegetation, results in an inability for animals to dig proper burrows, along with the collapsing and destruction of existing burrows. This habitat destruction often results in animals dying from dessication and/or over-exposure to light and temperature. Many people assume that such animals can simply migrate to other areas. But as the BLM points out:

When an animal leaves its home range and territory, it has two choices. It can move into unsuitable habitat or it can enter the territory of another member of the same species. Both choices cause stress to the animal because of competition for food, space, and cover... In the moderate ORV use areas, numbers of animals were reduced to 40 to 54 percent of the normal figures. In heavy use areas, numbers were reduced to 8 percent... Losses occur not only in number of animals but in number of species.³⁰

An animal that migrates increases its susceptibility to predation enormously. Also, it is at a distinct disadvantage since it must search for food in unfamiliar grounds. All this lends support to the proposition that increased land areas should be supplied to help maintain the existing numbers of endangered and endemic species. Corollary to this would be increased concern and restriction during mating and nesting seasons, which is crucial to sustaining animal populations.

At present, the BLM has only designed small "islands" of lands to be designated as "closed". In total, they constitute less than ten percent of the total California Desert land. Because of the mobility of animals and birds, along with the added mobility of ORVs and their far-reaching effects, large sections of land would be preferable in the designation category of "closed". With respect to wildlife, it may be preferable to designate as "closed" a segment of land that incorporates two or three existing "islands" rather than the present situation of isolated pockets. This would allow for a "buffer" for the kinds of displacement that are likely to occur with free-ranging animal and bird life. The increase in size would vary with regard to the particular needs and peculiarities of the plants and animals being considered. This could be most easily done in those areas furthest from urban areas and would help create a core of undisturbed wilderness land.

Finally, since the bulk of animal activity in the desert occurs at night, it is recommended that ORVs be restricted from any night-time activity. One advantage here is the increased safety to ORV users, since night use is extremely hazardous. The restriction also breaks the length and duration of noise produced by ORVs. As mentioned earlier, noise is one of the major sources of stress to animals, often resulting in abortion or even death to the animal through indirect sources such as parasites and disease. During the Barstow-Las Vegas Motorcycle Race

³⁰ BLM, Final EIS: Barstow-Las Vegas, op. cit., pp. III-20-21.

the BLM expected some animals to become deaf from the sustained noise.³¹ Noise is also a major source of irritation for human inhabitants and recreationists who travel to the desert for the explicit purpose of experiencing the "silence".

INFORMING THE PUBLIC

Due to the vast area and the small number of rangers (presently at about 25; one ranger for 480,000 acres), without the public's cooperation any management program for the California Desert is doomed to failure. Therefore, one of the primary objectives of the BLM should be adequate information dispersal. At present the BLM is involved in such a program through the uses of informational "way stations",³² television advertising time,³³ the publishing of an inventory-map designating the status of lands, plans to set up a radio station,³⁴ and public hearings.

But this information dispersal plan does not seem sufficient to reach the majority of ORV users. To this plan we would recommend additions:

- 1) The BLM should construct an information packet containing a map of those areas available for ORV use and a listing of restrictions for those areas. The map should be constructed such that it encourages ORV use in areas nearest urban centers.³⁵ One of the immediate advantages of encouraging use of lands near urban centers is the decreased consumption of gasoline during a time when conspicuous consumption of gasoline is contrary to national objectives. Encouraging the use of lands near urban centers which the BLM has determined as desirable for ORV use might be enhanced

³¹ Ibid., p. III-21. The BLM also points out that the "noise level generated by a single motorcycle is approximately 10,000,000 times greater than that experienced by a person in a quiet suburban residential area." (V-5)

³² At present, the BLM has established a way station at Barstow that includes natural history and geologic exhibits along with information regarding regulations.

³³ An interview with Bill Flint of the BLM indicated to us that the BLM had plans for T.V. advertising and showed us some films to be used. Since that time, commercials have been aired.

³⁴ Martin Prisco and Bill Mortimer of the BLM indicated plans underway for a radio station to attract people to the way station.

by listing restrictions of undesirable areas at the end of the packet, so as not to draw attention to those areas. This packet should be made available to ORV dealers and clubs in California free of charge. This would have the immediate effect of getting information to those people most likely to be using ORVs in the desert.

- 2) Television commercials should include a toll-free number that may be called for further information.
- 3) The BLM might also investigate the possibility of publishing a newsletter that would be available for subscription, and which would contain changes in policy and environmental information.

THE ENCOURAGEMENT OF PUBLIC PARTICIPATION

The BLM might investigate the possibilities of encouraging ORV club members to take part in actual desert management through field enforcement with BLM rangers. The obvious advantage here is that this would create increased numbers of ORV users who would have first hand information regarding the problems of desert management. This proposal should also include members of conservation and preservationist organizations.

Corollary to this proposal would be the sending of representatives to communities and schools to help with the dispersal of information. This would promote a sense of community participation and clarify the need for proper management.

ENFORCEMENT POWERS

A recent article published in the Los Angeles Times³⁶ regarding dune buggy use in the Kelso Dune Area (designated as "closed") exposed the enormous need for police powers by BLM rangers.³⁷ Presently, a BLM ranger has the authority to "request" that violators cease their

³⁶ Los Angeles Times, Sunday, March 2, 1975.

³⁷ People using dune buggies illegally expressed awareness of illegal use and ambivalence towards existing restrictions.

activity. If they should refuse, the only recourse the ranger has is to contact local authorities in the hope that they might respond before the violators depart. In addition to the damage to desert lands resulting from improper ORV use, there have been increasing amounts of vandalism, particularly with respect to archeologic sites. In effect, BLM lands are virtually without police authority or public cooperation.³⁸

The present bills being offered in Congress would adequately resolve this problem by granting BLM rangers arrest powers and by giving the BLM authority to contract with local agencies for enforcement.³⁹ It should be understood that these enforcement powers are not for the purpose of harrassing ORV users, but simply for preventing improper use by those who refuse to cooperate with established rules and regulations. We would also suggest that a system of stiff fines and penalties should be scaled to greater size if BLM rangers are few in number, since arrests are less likely.

INVENTORY OF LANDS

As an added "safety-valve" effect, we believe it would be advantageous for the BLM to take periodic inventories of its lands in the hope of determining if re-classification is necessary. The designation of an area as "restricted" or "special design" does not mean that this status is sufficient or that future demands and environmental repercussions might not require a re-evaluation.

For example, the Barstow-Las Vegas race which was held Saturday, November 30, 1974, was surrounded by controversy over whether the race should be held at all. Since the holding of the race, new environmental impact information has surfaced that was not anticipated in the Final Environmental Impact Statement. This new information indicates unexpected damage to archeologic sites,⁴⁰ and greater "area" damage than originally thought.⁴¹ This information should have profound

³⁸ This feeling that the desert is essentially "open" was expressed consistently in interviews with staff of the BLM.

³⁹ S71 and HR820.

⁴⁰ As indicated by telephone conversation with Sylvia Broadbent (Anthropology Department, University of California, Riverside).

⁴¹ This greater "area damage" was indicated by an interview with Dick Kuehner, an environmentalist at the BLM.

effects on the future running of the race (and other such events) along with the classification of lands for such events. (Note: The race was not permitted in 1975.)

Another example is the discovery of the Santa Ana Dust Plumes.⁴² The BLM could not have anticipated such findings from a weather satellite. But with this new information a reassessment of ORV use in areas associated with such phenomena is necessary.

These and other examples of unexpected environmental damage, along with the emergence of new recreational demands, require that the BLM maintain the flexibility to change the status of lands, particularly those designated as "unrestricted" and "special design" since these are the areas most susceptible to unusual findings.

We do not have sufficient information to determine how often such an inventory should occur, but interviews with various BLM officials suggest that annual inventories "might" not be out of hand.

LAND TRANSFERENCE⁴³

According to the BLM, those lands designated as "closed", have been given this classification because of their extremely rare or unusual resources that cannot be renewed. In other words, the land is "closed" to ORVs for the purpose of preservation.

Since this is the case, it would be in the best interest of the land to transfer it to another agency of the Federal Government that is better equipped to maintain the present condition of the land. This transfer could be only temporary, until the BLM can show that it has become able to protect adequately and manage land in a wilderness state. The land could be transferred to the National Park Service, making the land a part of the Wilderness System, National Wildlife Refuge System, or be subject to the regulations of the Wild Rivers and Scenic Lands Act, or be designated as a National Historic Site.

⁴² L.W. Bowden, J.R. Huning, C.F. Hutchinson, C.W. Johnson, op. cit.

⁴³ Dick Kuehner of the BLM indicated that land transference of lands into another agency might not be desirable because of the bureaucratic problem posed by increased need for inter-agency cooperation. After discussion, we recognize this problem but feel that the advantages outweigh this particular disadvantage.

The immediate and obvious benefit is that the public is well aware of restrictions regarding ORV use in National Parks, Monuments, National Wildlife Refuge Lands, and Wild Rivers and Scenic Lands or lands that are subject to the Wilderness Act and therefore are less likely to become violators, knowing that stiff penalties do exist. The BLM might also investigate the possibilities of donating lands to the State Park System for the explicit purpose of preservation.

Lands (besides those already designated as "closed") that should be specifically considered for transfer are those with valuable and dense occurrence of archeologic sites, and lands containing endemic and/or endangered species. Lands with unusual archeologic sites could be designated as National Historic Sites if they meet National Register requirements.

CONCLUSION

Since the BLM is presently working under great limitations (i.e., no enforcement authority, limited staff, etc.) it is no surprise that its management programs are not adequately implemented. In spite of this, the BLM has done a commendable job. With the increased monies and powers that appear to be forthcoming from Washington, a management program tailored to this new structure can be implemented. The BLM, for the first time, will have the opportunity to supervise and guarantee proper implementation of its management. It will also be able to include elements within the program that previously would not have been practical. These additions, as we have tried to outline them, include:

- 1) The restricting of ORVs on the desert during the certain times and places of the year when the desert is particularly vulnerable to damage. This includes restrictions of ORV use in areas during the rainy season and during the mating season.
- 2) The designation of larger areas as "closed" for the purpose of preserving endemic and endangered species.
- 3) The restriction to day-time use only.
- 4) The need to increase attempts to inform the public of the need for and existence of restrictions on ORV use. This would include:
 - a) Information packets outlining rules and regulations, along with maps designating areas of desert available for use (particularly areas near urban centers).
 - b) Continued T.V. commercial time and a toll-free telephone number.

- c) A published newsletter.
 - d) Promoting the participation of ORV club members and preservation club people in BLM enforcement activities.
 - e) Sending BLM representatives to communities and schools.
- 5) The addition of enforcement powers within a structure of stiff fines and penalties.
 - 6) The compiling of an annual inventory of lands to determine if reclassification and new restrictions (along with deletions) may be necessary.
 - 7) The temporary or permanent transfer of lands designated as "closed" to another federal agency better equipped to maintain a preservation status.

We feel that if the BLM follows such a plan, the desert can be managed for the continued enjoyment of future generations and the continued life of the desert ecosystem.

BIBLIOGRAPHY

Books and Articles

- M.F. Baldwin and D.H. Stoddard, Jr., The Off-Road Vehicle and Environmental Quality, 2nd ed., The Conservation Foundation, Washington, D.C., 1973.
- S. Bennett, A Trail Rider's Guide to the Environment, American Motorcycle Association, Westerville, Ohio, 1973.
- Leonard Bowden, James R. Huning, Charles F. Hutchinson, Claude W. Johnson (Dept. of Earth Sciences, U.C. Riverside), "Satellite Photograph Presents First Comprehensive View of Local Wind: The Santa Ana," Science, June 1974, vol. 184, no. 4141.
- R.E. Cameron and G.B. Blank, Desert Algae: soil crusts and diaphonous substrata as algal habitats, Technical Report 32-971, Jet Propulsion Laboratory, California Institute of Technology, Pasadena.
- L.J. Carter, "Off-Road Vehicles: A Compromise Plan for the California Desert," Science, vol. 183, no. 4123, 1974.
- Edna W. Chandler and Joseph O. Chandler, "Sand Dunes: Problem or Prize?" American Forests, vol. 78, January 1972.
- John Fialka, "The Off-the-Road Menace," Environmental Quality, vol. 4, April 1973.
- Richard A. Grant, Jr., "The Fight for the California Desert; Conserve or Destroy?" Cry California, Winter, 1972-1973.
- Jack Hope, "The Invasion of the Awful ORV's," Audubon, vol. 74, January 1972.
- Jean Norma Lodico, Environmental Effects of Off-Road Vehicles: A Review of the Literature, U.S. Dept. of the Interior, September 1973.
- Los Angeles Times:
- Lewis Regenstein, "The Dire Threat to our Wildlife Preserves," Editorial Section, Thursday, February 27, 1975.
- Philip Fradkin, "Controversy Rages Over Use of Vehicles in Desert," Part II, page 1, Sunday, March 2, 1975.
- "Tracks Across the Desert," Part II, page 6, Wednesday, March 5, 1975.
- Robert C. Lucas, "Hikers and Other Trail Users," Forest Recreation Symposium, Syracuse, N.Y., 1971. Proceedings. Upper Darby, Pa., U.S. Northeastern Forest Experiment Station.

A. Pearce, "Vehicle Use Blamed for Blowing Sand," Desert Sun, June 28, 1972.

M.A. Romero, ed., Amargosa Canyon-Dumont Dunes Proposed Natural Area, report submitted to the BLM by the Pupfish Habitat Preservation Committee, written by J.M. Sulby, M.A. Romero and R.D. Smith, 1972.

Robert C. Stebbins, "Off-Road Vehicles and the Fragile Desert, Part I," The American Biology Teacher, April 1974.

Robert C. Stebbins, "Off-Road Vehicles and the Fragile Desert, Part II," The American Biology Teacher, May 1974.

U.S. Bureau of Land Management, The California Desert: a Recreation Study of the Desert Public Domain Lands of California Under the Jurisdiction of the BLM, Sacramento, 1968. (Prepared by the California State Office of the BLM and the Western Regional Office of the National Park Service.)

U.S. Bureau of Land Management, The California Desert, January 1970.

U.S. Bureau of Land Management, Draft Environmental Impact Statement, Proposed Barstow-Las Vegas Motorcycle Race, September 1974.

U.S. Bureau of Land Management, Final Environmental Impact Statement, Barstow-Las Vegas Motorcycle Race, October 1974.

U.S. Office of Noise Abatement and Control, "Public Hearings on Noise Abatement and Control," vol. 5, Agricultural and Recreational Use Noise, Denver, Colo., September 30-October 1, 1971; Washington, D.C., U.S. Government Printing Office, 1972.

T.H. Watkins, "Infernal Machines on the Public Lands," Cry California, vol. 4, Spring 1969.

Legislative Material

By Mr. Cranston (for himself and Mr. Tunney), Congressional Record--Senate, January 15, 1975, S141-145.

93rd Congress, 1st Session, S.63, "A Bill to establish the California Desert National Conservation Area, and for other purposes." By Mr. Cranston and Mr. Tunney, January 4, 1973 (read twice and referred to the Committee on Interior and Insular Affairs).

93rd Congress, 1st Session, S.424, "A Bill to provide for the management, protection and development of the national resource lands, and for other purposes." By Mr. Jackson and others, January 18, 1973 (read twice and referred to the Committee on Interior and Insular Affairs).

Federal Register, Monday, April 15, 1974, Washington, D.C., vol. 39, no. 73, Part II: "Department of the Interior, Bureau of Land Management; Public Lands--Use of Off-Road Vehicles."

Executive Order 11644, Federal Register, vol. 37, no. 27, Wednesday, February 9, 1972, "Use of Off-Road Vehicles on the Public Lands."

"Hearings before the Subcommittee on Public Lands," Calendar No. 848, 93rd Congress, 2nd Session, Senate 424, Report No. 93-873.

Interviews

Dr. Sylvia Broadbent, Chairperson of the Anthropology Department, University of California, Riverside (telephone).

Bill Flint, Director of Public Relations, Bureau of Land Management, Riverside Office.

Tim Hanify, Desert Coordinator, Ecology Center of Southern California.

Lou Haas, Field Representative for Senator Alan Cranston.

Dick Kuehner, Environmentalist involved in the Desert Planning Program for the Bureau of Land Management, Riverside Office.

Bill Mortimer, Area Manager, High Desert Resource Area Headquarters, Bureau of Land Management (Barstow).

John Paeschke, Office of Senator John Tunney.

Nancy Pearlman, Executive Director, Ecology Center of Southern California.

Dave Petersen, Sierra Club, area coordinator and desert tasker.

Martin Prisco, Desert Planning Program, Bureau of Land Management, Riverside Office.

Ann Ray, Office of Alan Cranston, Washington, D.C.

Bureau of Land Management
Ecology Center
Barstow, California